



Facade drainage



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ACO facade channels for balconies, terraces and roof gardens

ACO facade and terrace channels provide perfect solutions for every situation. It is very important that moisture should never be able to get into a building from outside around those tricky areas in front of doors and facades. ACO products guarantee this protection as well as boasting the following benefits:

- Safe and fast drainage of even large quantities of rain
- Additional backflow reserve for periods of sudden very heavy rainfall
- Preventing the formation of puddles around facades
- Protecting indoor areas from penetrating moisture
- Preventing water from splashing up during very heavy rainfall
- Use as a walk-on grating for maintenance and cleaning work

ACO facade and terrace channels comply with all the relevant regulations. They cannot be forced up under the pressure of wind, and they avoid the pooling of water in particularly problematic areas. Another problem that has to be tackled in this context is the presence of snow drifts, slush and ice: increased heat radiation makes snow and ice thaw faster around doors. The unfrozen snow or slush around the puddle of melt water can prevent the water from flowing away properly. Drainage channels must therefore be capable of coping with such conditions. The height of the channel must match the actual volumes of water expected. Hydraulic verification of this kind can be prepared at any time by ACO Applications Technology.

The stainless steel and galvanised steel models in the system satisfy all architectural specifications. The different gratings can be matched to a wide range of designs.



Barrier-free thresholds – ACO facade channels are perfectly integrated within their surroundings. The variable height adjustment allows them to be adjusted with mm-accuracy to the height of the floor. ACO therefore not only satisfies the modern demand for barrier-free buildings, but also the high quality standards of architects and planners.





Standards

The following standards amongst others have to be observed when planning and building drainage systems for balconies, loggias and terraces:

- DIN 1986-100
- DIN 18195-5
- Flat roof regulations

The most important aspects are as follows:

Channels for balconies and loggias

DIN 1986-100, Chapter 5.10 specifies that balconies, loggias and terraces must have a drain or a channel fixed at the periphery.

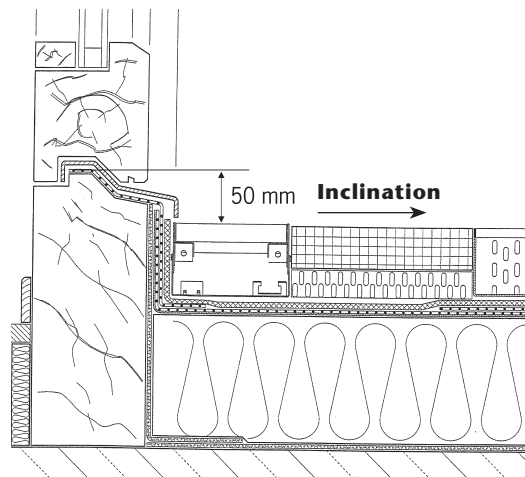
Emergency drainage

Balconies and loggias with closed balustrades must have a drain as well as an emergency drain with a width of at least 40 mm in the balustrade (DIN 1986-100, Chapter 5.10).

Positioning the channels

A drainage channel can only become fully effective in reducing the moisture risk around door thresholds when it extends at least the whole width of the door and is located close enough to the threshold.

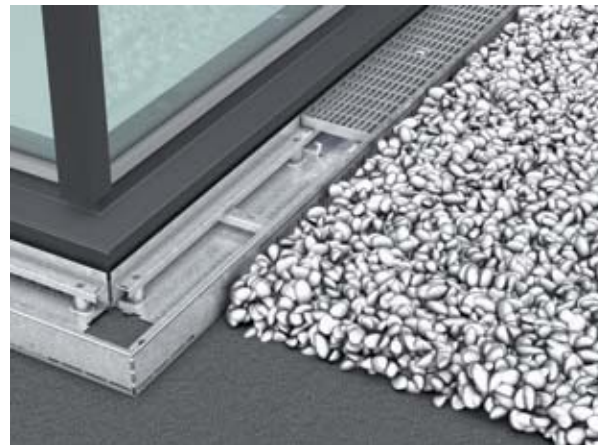
The connection height of 150 mm for building seals specified in DIN 18195-5 can be reduced to 55 mm pursuant to the flat roof regulations when using ACO line drainage systems.



Gravel layer for facade and terrace channels

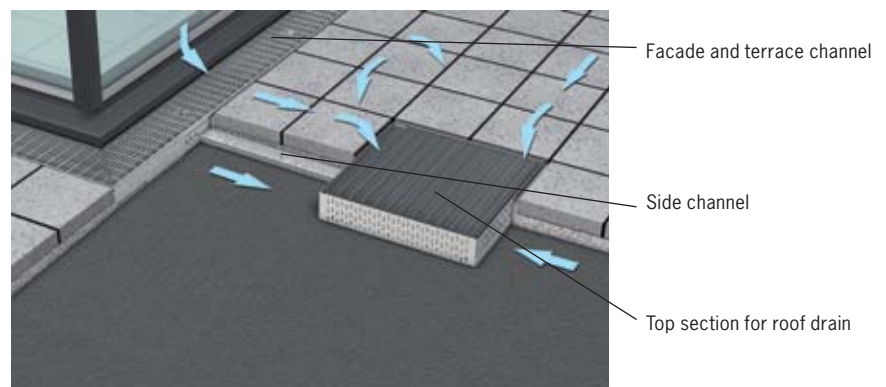
The safe drainage of rainwater and suspended materials in a terrace drainage system is achieved via the lateral drainage slots in the side channels which feed into the drains in the space below paving slab coverings with paving supports/mortar bags or in the drainage layer.

The drainage slots should not be smaller than 4 mm to prevent fusion. Using chippings smaller than 4 mm is unproblematic because experience shows that these jam up in front of the slot and therefore only a few chippings enter the channel itself.

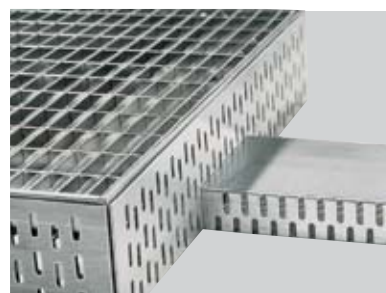


Side channels and top sections

The ACO Profiline channel system accessories include side channels and top sections in various sizes acting as roof drains and maintenance shafts. The side channel is a 30 mm high and 100 mm wide hollow duct with 4 mm lateral drainage slots. The ends are placed flush to the drainage slots of the channel body and the top section of the roof drains, and are positioned within the drainage layer. They therefore link the channel body to the top section to form a drainage channel for direct connection between the channel and the drain.



The top sections for the roof drains in the terrace surfaces must be positioned above the roof drains – where they also act as inspection shafts. Lattice gratings permanently incorporated in the terrace surface covering must not be simultaneously fastened to the roof drain.



Side channel

Assembly/integration of several channel elements



Adapter elements can be placed directly within channel elements. They are not fastened in place.



Several channel elements can be directly linked up. No fastenings are used.



Two channel elements with a centrally positioned adapter element.

Adjusting the height of channel elements and grating locks



The height is adjusted with a screwdriver. Adjustment can also be carried out when the channel has been installed. The degree of height adjustment depends on the type of channel element.



When the grating has been positioned in the channel, it can be locked with a screwdriver.

Using the variable corner element



The corner element can be adjusted on site to any angle between 0 – 90°.



Channel elements are laid from the corner element. The frame of the corner element is used to position the walls of the channels.



Adapter elements cannot be placed directly against a corner element. They always have to be connected to a channel element.

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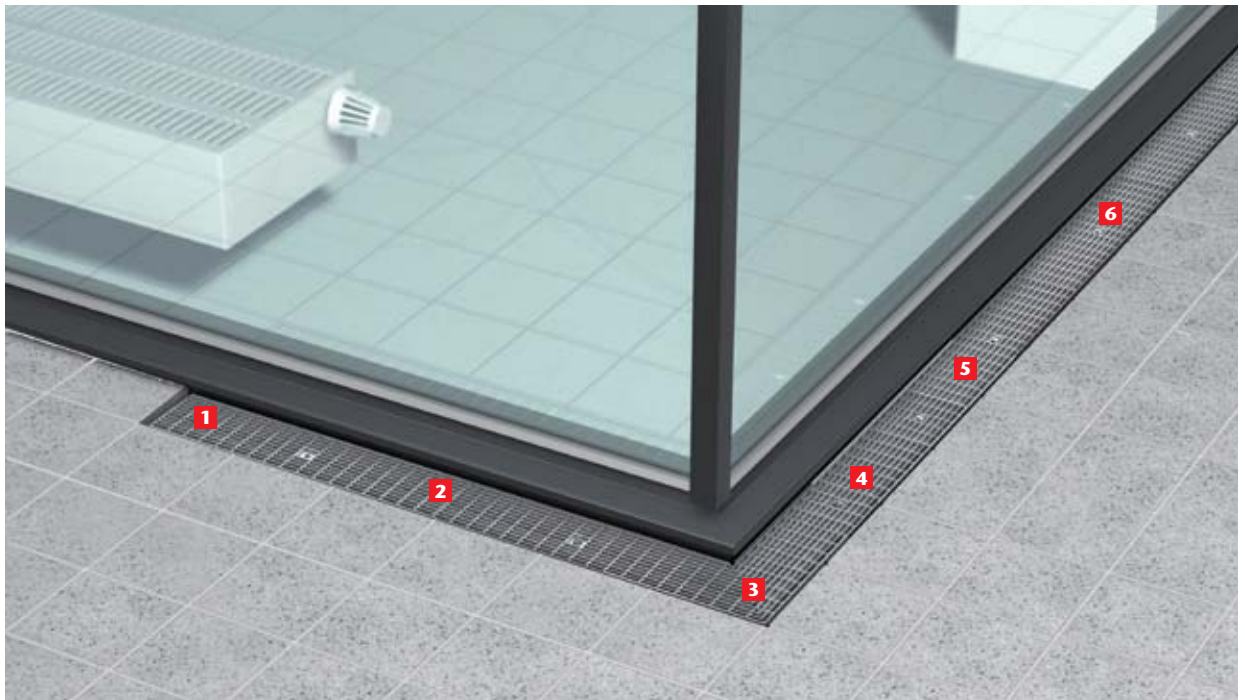
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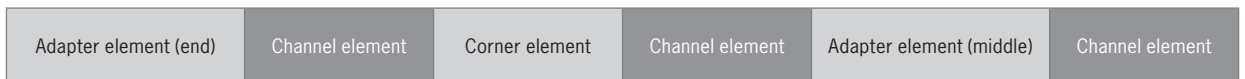
Installation recommendation

ACO facade channel



- 1** Adapter element (end) **3** Corner element **5** Adapter element (middle)
- 2** Channel element **4** Channel element **6** Channel element

Proper arrangement of the components



Corner elements cannot be connected to adapter elements: they must always be directly connected to channel elements.

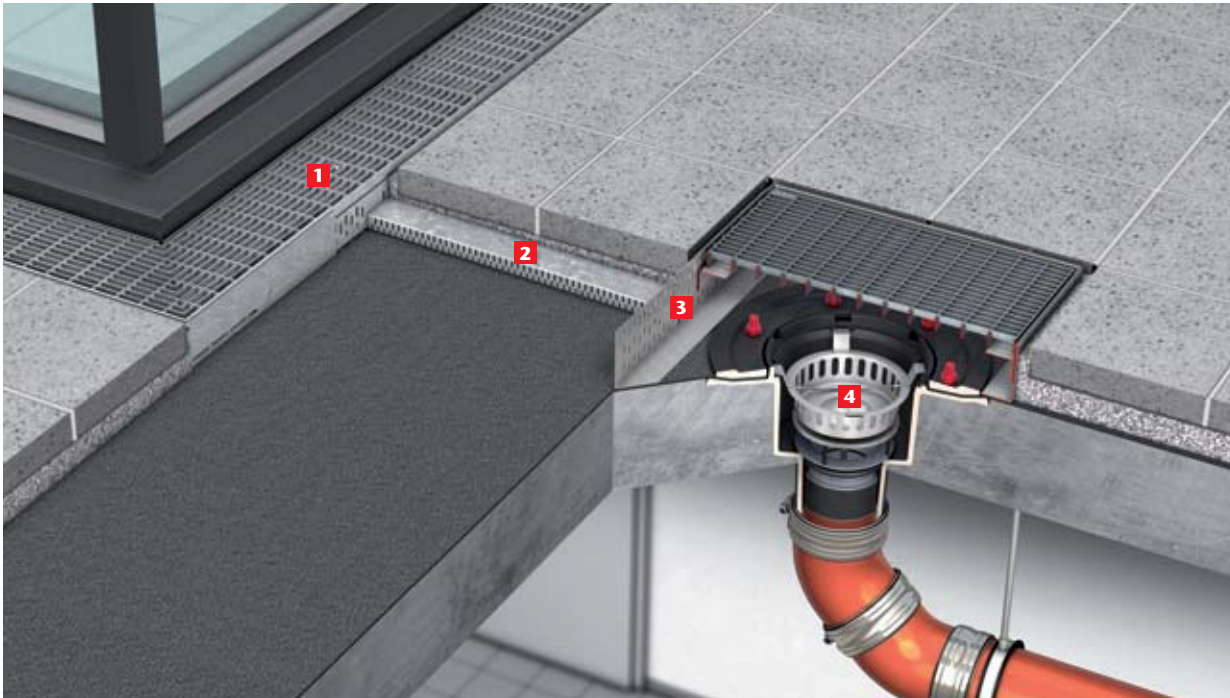
Heights

All channel elements are available in one fixed version and three height-adjustable versions. No adapter elements and corner elements are available for channel elements with a fixed height.

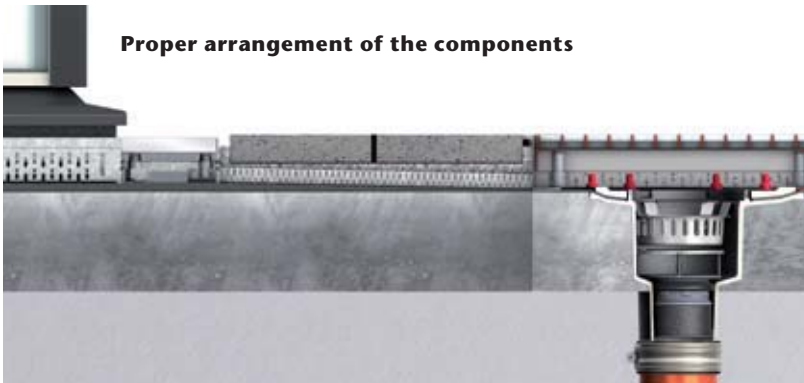
H = 50 or 75 mm (fixed)	H = 55–78 mm (infinitely height-adjustable)	(H = 78–108 mm (infinitely height-adjustable)	(H = 108–168 mm (infinitely height-adjustable)
No adapter element or corner elements available	Adapter element and corner element available	Adapter element and corner element available	Adapter element and corner element available

Installation recommendation

ACO facade channel with side channel and top section



- 1** Channel or adapter element
- 2** Side channel
- 3** Top section with grating
- 4** Roof drain



Proper arrangement of the components

The side channel is positioned without fastening against the top section and the channel, and held in place within the gravel layer by the whole system. The side channel can be shortened on site. The top section should be used above roof drains and terraces. Gratings must be removable.

Heights

Side channel	Top section	
<p>The side channel can be laid on either concrete or a gravel layer.</p>	<p>The height-adjustable top sections can be raised again by heights of 30, 60 or 120 mm using the extension elements. Several extension elements can be stacked on top of one another.</p>	

ACO Profiline facade and terrace channel

height-adjustable

- ACO Profiline facade and terrace channel, available as either:
 - channel element
 - adapter element (middle)
 - adapter element (end)
 - corner element
- Infinitely height adjustable from above, adjustment ranges from:
 - 55-78 mm
 - 78-108 mm
 - 108-168 mm
 - or fixed height of 50 or 75 mm
- Integrated gravel strip on both sides to prevent water accumulating against the facade, 4 mm drain slots, closed channel floor, factory pre-assembled grating lock and channel connection system, for interior gratings, tough enough to resist the weight of pedestrians and wheel-chairs.

Material: either galvanised steel or stainless steel, material 1.4301
 Width: either 100, 130 or 250 mm
 Length: 500 mm or 1000 mm (channel elements)
 600 mm (adapter element)



ACO Profiline channel element

The pre-assembled channel elements have no loose separate components. The channel elements are joined to one another using a simple push-fit system. The completely closed channel floor guarantees very high levels of stability and load distribution. The adapter elements can be used to create channels of any length.



ACO Profiline adapter element (middle)

The adapter element middle is used to adjust the length of a line drainage system. It is simply positioned between two channel bodies and can be used for an infinitely adjustable join with lengths from 50 to 500 mm between at least two channel elements.

e.g. 1350 mm:
 2 x 500 mm channel elements
 1 x adapter element middle



ACO Profiline variable corner element

The variable corner element enables any angle to be created from 0 to 90° without having to cut the channel bodies. It is used to join up channel elements and forms a very stable framework for the gratings. (Cannot be connected to an adapter element!)

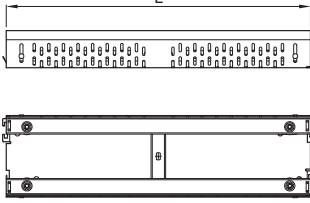
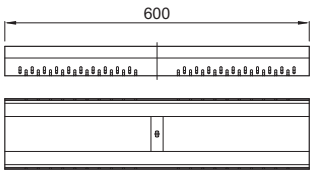
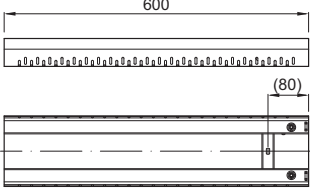


ACO Profiline adapter element (end)

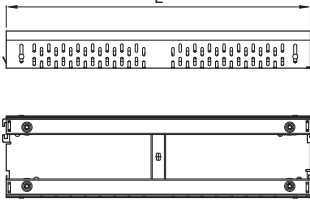
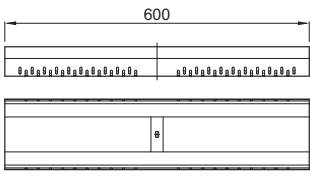
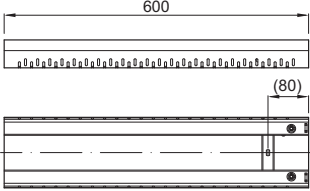
The adapter element end can also be used for infinitely adjusting the length of a line of channels, in the range 100 – 550 mm, at the end or in front of a channel element.

e.g. 890 mm:
 1 x 500 mm channel element
 1 x adapter element end

ACO facade channel elements, height-adjustable. Galvanised steel

	Width (W)	Length (L)	Article No.		
			H = 55-78 mm	H = 78-108 mm	H = 108-168 mm
Channel element					
	100	1000	38594	38600	38606
		500	38595	38601	38607
	130	1000	39642	36788	36806
		500	39640	36789	36807
	250	1000	36776	36794	36812
		500	36777	36795	36813
Adapter element middle					
	100	600	38596	38602	38608
	130	600	36948	36790	36808
	250	600	36778	36796	36814
Adapter element end					
	100	600	38597	38603	38609
	130	600	36956	36791	36809
	250	600	36778	36797	36815


ACO facade channel element, height-adjustable, stainless steel, material 1.4301

	Width (W)	Length (L)	Article No.		
			H = 55-78 mm	H = 78-108 mm	H = 108-168 mm
Channel element					
	100	1000	38612	38618	38624
		500	38613	38619	38625
	130	1000	38942	36836	36854
		500	36943	36837	36855
	250	1000	36824	36842	36860
		500	36825	36843	36861
Adapter element middle					
	100	600	38614	38620	38626
	130	600	36949	36838	36856
	250	600	36826	36844	36862
Adapter element end					
	100	600	38615	38621	38627
	130	600	36958	36839	36857
	250	600	36827	36845	36863


Accessories and additional components

ACO Profiline terrace channel, height-adjustable


Front wall, galvanised steel, or stainless steel

	Width (W)	Material	Article No.		
			H = 55–78 mm	H = 78–108 mm	H = 108–168 mm
	100	Galvanised steel	38599	38605	38611
	130		36950	36793	36811
	250		36783	36799	36817
	100	Stainless steel, 1.4301	38617	38623	38629
	130		36951	36841	36859
	250		36829	36847	36865

Corner element, galvanised steel or stainless steel

	Description	Material	Article No.
	ACO Profiline corner element – for forming corners with angles of 0 – 90 degrees – fits heights between 55 – 168 mm and all widths	Galvanised steel	38634
		Stainless steel, 1.4301	38643

Side channel, galvanised steel or stainless steel

	Description	Material	Article No.
	ACO Profiline side channel – integrated gravel strip on both sides, 4 mm drain slots – material: galvanised steel – width: 100 mm – height: 30 mm – length: 2000 mm	Galvanised steel	00328
		Stainless steel, 1.4301	00307

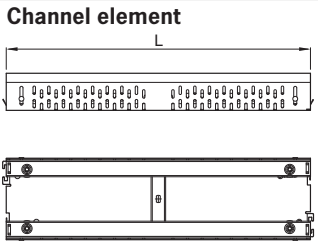
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ACO Profiline facade and terrace channels

Fixed heights

- ACO Profiline facade and terrace channel, as channel element, available in two fixed heights
 - 50 mm
 - 75 mm
 - Integrated gravel strip on both sides to prevent water accumulating against the facade, 4 mm drain slots, closed channel floor, factory pre-assembled grating lock and channel connection system, for interior gratings, tough enough to resist the weight of pedestrians and wheel-chairs.
- Material: Either galvanised steel or stainless steel, material 1.4301
- Width: Either 130 mm (galvanised steel) or stainless steel, or 250 mm (galvanised steel)
- Length: mm


ACO Profiline facade channel elements, fixed height, galvanised steel

Channel element	Width (W)	Length (L)	Article No.			
			H = 50 mm	H = 75 mm	H = 50 mm	H = 75 mm
	100	2000	38145	36980	38220	36985
		1000	38146	36981	38221	36986
	130	500	38147	36982	38222	36987
		2000	38792	–		
	250	1000	38793	–		
		500	38794	–		


Accessories and additional components

ACO Profiline terrace channel, fixed height

end wall, galvanised steel or stainless steel

	Width (W)	Material	Article No.	
			H = 50 mm	H = 75 mm
	130	Galvanised steel	38148	36983
		Stainless steel	38223	36988
	250	Galvanised steel	38795	–

Side channel, galvanised steel or stainless steel

	Description	Material	Article No.
	ACO Profiline side channel – integrated gravel strip on both sides, 4 mm drain slots – material: galvanised steel – width: 100 mm – height: 30 mm – length: 2000 mm	Galvanised steel	00328
		Stainless steel, 1.4301	00307

Gratings for ACO facade channels



Galvanised steel

	Product	Width	Length	Lattice width	Article No.
	ACO Profiline bar grating complete with bolts, withstands pedestrians and wheelchairs material: galvanised steel	130	1000	—	00276
			500	—	00277
	ACO Profiline lattice grating complete with bolts, withstands pedestrians and wheelchairs material: galvanised steel	100	1000	30 x 10	38431
			500	30 x 10	38430
		130	1000	30 x 10	38433
			500	30 x 10	38432
			1000	30 x 14	26953
		250	500	30 x 14	36952
			1000	30 x 10	38435
			500	30 x 10	38434
			1000	30 x 14	38964
500	30 x 14	38965			
	ACO Profiline perforated grating complete with bolts, withstands pedestrians and wheelchairs material: galvanised steel	100	1000	—	38524
			500	—	38525
		130	1000	—	38968
			500	—	36969
	ACO Profiline baton grating without bolts withstands pedestrians and wheelchairs material: galvanised steel	130	1000	—	38551
			500	—	38552
	ACO Profiline longitudinal baton grating 3 x 15 mm batons without bolts, withstands pedestrians and wheelchairs Material: galvanised steel	130	1000		38811
			500		38810

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Stainless steel, material 1.4301

	Product	Width	Length	Lattice width	Model	Article No.
	ACO Profiline bar grating complete with bolts, withstands pedestrians and wheelchairs material, stainless steel 1.4301	130	1000	—	Pickled	00272
			500	—	Pickled	00273
	ACO Profiline lattice grating complete with bolts withstands pedestrians and wheelchairs material, stainless steel 1.4301	100	1000	30 x 10	Pickled	38439
			500	30 x 10	Pickled	38438
		130	1000	30 x 10	Pickled	38441
			500	30 x 10	Pickled	38440
			1000	30 x 14	Pickled	36955
		250	500	30 x 14	Pickled	36954
			1000	30 x 10	Pickled	38443
			500	30 x 10	Pickled	38442
			1000	30 x 14	Pickled	36970
500	30 x 14	Pickled	36971			
	ACO Profiline perforated grating complete with bolts, withstands pedestrians and wheelchairs material, stainless steel 1.4301	100	1000	—	Pickled	38527
			500	—	Pickled	38528
		130	1000	—	Pickled	38975
			500	—	Pickled	36974
	ACO Profiline Heelsafe (longitudinal baton grating) , coarse without bolts, withstands pedestrians and wheelchairs material, stainless steel 1.4301	100	1000	—	Coarsely brushed	38563
			500	—	brushed	38564
		130	1000	—	Coarsely brushed	37491
			500	—	brushed	37492

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Stainless steel, material 1.4301

	Product	Width	Length	Model	Article No.
	<p>ACO Profiline Heelguard (longitudinal baton grating, fine) without locking bolts, withstands pedestrians and wheelchairs material, stainless steel 1.4301</p>	100	1000	Finely brushed	38566
			500	Finely brushed	38567
	<p>ACO Profiline baton grating without locking bolts, withstands pedestrians and wheelchairs material, stainless steel 1.4301</p>	130	1000	Sand blasted	37498
			500	Sand blasted	37499
	<p>ACO Profiline slotted grating without locking bolts, withstands pedestrians and wheelchairs material, stainless steel 1.4301</p>	130	1000	Pickled	38553
			500	Pickled	38554
	<p>ACO Profiline longitudinal slotted channel without locking bolts, withstands pedestrians and wheelchairs material, stainless steel 1.4301</p>	130	1000	Pickled	38555
			500	Pickled	38556
	<p>ACO Profiline longitudinal baton grating 3 x 15 mm batons without locking bolts, withstands pedestrians and wheelchairs material, stainless steel 1.4301</p>	130	1000	Pickled	38813
			500	Pickled	38812

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Top sections for ACO roof drains



- ACO Profiline top section for roof drains, integrated gravel strip on both sides, 4 mm drain slots
- Open channel floor for maintenance purposes, for internal grating, withstands pedestrians and wheelchairs.

Material: galvanised steel or stainless steel, 1.4301
 Frame dimensions: either 400 x 400 mm or 500 x 500 mm
 Height: either 50 mm or height adjustable 78 – 108 mm

	Frame dimensions	Article No.	
		Galvanised steel	Stainless steel, 1.4031
Fixed height: 50 mm 	400 x 400	38150	38156
	500 x 500	38630	38632
Height adjustable 78 – 108 mm 	400 x 400	38801	38803
	500 x 500	38631	38633

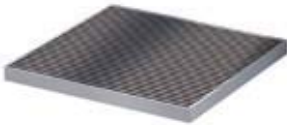
Lattice gratings for top sections

	Product	Frame dimensions	Lattice width	Model	Article No.
	ACO Profiline lattice grating withstands pedestrians and wheelchairs	400 x 400	30 x 10	Galvanised steel	38570
		400 x 400	30 x 14	Galvanised steel	36754
		400 x 400	10 x 30	Steel pickled	38573
		400 x 400	14 x 30	Steel pickled	36760
		500 x 500	30 x 10	Galvanised steel	38571
		500 x 500	10 x 30	Stainless steel pickled	38574

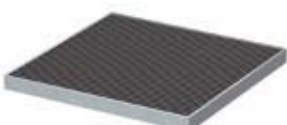
Perforated grating for top sections

	Product	Frame dimensions	Model	Article No.
	ACO Profiline perforated grating withstands pedestrians and wheelchairs	400 x 400	Stainless steel pickled	38583
		500 x 500	Stainless steel pickled	38584


Perforated gratings for top sections

	Product	Frame dimensions	Model	Article No.
	ACO Profiline Heelsafe (longitudinal baton grating, 7 – 12.5) withstands pedestrians and wheelchairs	400 x 400	Brushed stainless steel Grating type: coarse	38589
		500 x 500	Brushed stainless steel Grating type: coarse	38590

Perforated gratings for top sections

	Product	Frame dimensions	Model	Article No.
	ACO Profiline Heelguard (longitudinal baton grating, 3-8) withstands pedestrians and wheelchairs	400 x 400	Brushed stainless steel Grating type: fine	38592
		500 x 500	Brushed stainless steel Grating type: fine	38593

Extension units for top sections

	Product	Frame dimensions	Model	Article No.	Artikel-Nr.
	ACO Profiline extension units for top sections	400 x 400	Galvanised steel	30	38685
				60	38587
				120	38689
			Stainless steel 1.4301	30	38686
				60	38688
				120	38690
		500 x 500	Galvanised steel	30	38691
				60	38693
				120	38695
			Stainless steel 1.4301	30	38695
				60	38694
				120	38696

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